

minimally to depart the lens posterior at only a slightly diffracted angle. As in the case with the embodiment of FIG. 12, reflections can be further reduced by masking the surface area in the region of the junctions between segments.

#### MODE OF OPERATION

In the case where a defective natural lens is to be replaced, it is customary to make extensive measurements on the eye prior to the removal of the defective natural lens and its replacement with a fixed focus implantable lens. Such measurements allow the selection of a lens having appropriate power for the individual and the nominal distance to the object which is desired to be brought into focus on the retina. This approach to the problem has the disadvantage that a wide range of powers must be available to the surgeon. Since each lens is individually fabricated, the economic burden of fabricating a wide variety of powers adds substantially to the cost of lenses. It would be much cheaper to manufacture only a few lenses and use them in all patients. The cost of manufacture would be reduced and inventory requirements would be much less burdensome.

Reduction of the cost of the lenses would have the effect of increasing the availability of this procedure to those who currently lack the economic means to afford such an operation. This is particularly the case in third world countries where costs are often the overriding consideration in medical care.

Various modifications can be made to the present invention without departing from the apparent scope herein.

I claim:

1. A zone of focus lens for use with an eye comprising:

- a. a cylindrical optical element;
- b. at least one annular optical element joined and concentric with said cylindrical element to form a unitary lens structure having a front surface, a rear surface and a circular periphery;
- c. each of said elements serving to create an image on distinct portions of the retina;
- d. at least two of said elements having different powers whereby objects at different distances from the eye are simultaneously brought to a focus on distinct portions of the retina; and,
- e. at least two of said lens elements are different colors.

2. A lens according to claim 1 wherein at least two of said elements are of materials having different indices of refraction.

3. A lens according to claim 1 wherein at least two of said elements have different surface curvature.

4. A lens according to claim 3 further including a layer of transparent material overlying one of said front and rear surfaces to provide a smooth surface thereon.

5. A lens according to claim 3 further including first and second layers of transparent material overlying said front and rear surfaces, respectively, to provide smooth surfaces thereon.

6. A lens according to claim 1 wherein the boundaries between said elements include an anti-reflection material.

7. A lens according to claim 1 wherein the surface area of the boundaries between said elements are masked with an opaque material to block passage of rays which would otherwise cause reflections.

8. A lens according to claim 1 wherein said elements are joined with a transparent adhesive material.

9. A lens according to claim 8 wherein said adhesive material includes an anti-reflection additive.

10. A lens according to claim 1 wherein said elements are extrusion joined.

11. A lens according to claim 1 wherein adjacent ones of said elements have different indices of refraction.

12. A lens according to claim 1 comprised of elements each having different indices of refraction.

13. A lens according to claim 12 consisting of three elements.

14. A lens according to claim 11 having at least three elements.

15. A lens according to claim 1 wherein the front surface area of said annular element is greater than the front surface area of said cylindrical element.

16. A lens according to claim 1 wherein said elements providing sharp focus images of near objects are positioned within the inner half of the lens.

17. First and second lenses according to claim 1 for use in left and right eyes wherein like power elements are similarly positioned.

18. A lens according to claim 1 having a planar front surface and a convex rear surface to reduce internal reflections.

19. A lens according to claim 18 wherein the surface areas of the boundaries between said elements are masked with an opaque material to block passage of rays which would otherwise cause reflections.

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